

In the Claims:

1. (Withdrawn) A personal hair removal device comprising:
a substrate;
a plurality of blades connected to said substrate, each
of said blades comprising at least one cutting edge with a
radius of curvature not greater than about 1000 angstroms.
2. (Withdrawn) A hair removal device according to claim 1 wherein said
radius of curvature is not greater than about 500 angstroms.
3. (Withdrawn) A hair removal device according to claim 1 wherein said
radius of curvature is not greater than about 250 angstroms.
4. (Withdrawn) A hair removal device according to claim 1 wherein said
radius of curvature is not greater than about 75 angstroms.
5. (Withdrawn) A hair removal device according to claim 1 wherein said
radius of curvature is not greater than about 50 angstroms.
6. (Withdrawn) A hair removal device according to claim 1 wherein said
radius of curvature is not greater than about 30 angstroms.
7. (Withdrawn) A hair removal device according to claim 1 wherein said
radius of curvature is not greater than about 10 angstroms.
8. (Withdrawn) A hair removal device according to claim 1 comprising at
least about 10 blades.
9. (Withdrawn) A hair removal device according to claim 1 comprising at
least about 50 blades.
10. (Withdrawn) A hair removal device according to claim 1 comprising at
least about 100 blades.

11. (Withdrawn) A hair removal device according to claim 1 comprising at least about 200 blades.

12. (Withdrawn) A hair removal device according to claim 1 comprising at least about 500 blades.

13. (Withdrawn) A hair removal device according to claim 1 comprising at least about 1000 blades.

14. (Withdrawn) A hair removal device according to claim 1 wherein said blades comprise a cutting depth of not greater than about 1000 microns.

15. (Withdrawn) A hair removal device according to claim 1 wherein said blades comprise a cutting depth of not greater than about 500 microns.

16. (Withdrawn) A hair removal device according to claim 1 wherein said blades comprise a cutting depth of not greater than about 250 microns.

17. (Withdrawn) A hair removal device according to claim 1 wherein said blades comprise a cutting depth of not greater than about 100 microns.

18. (Withdrawn) A hair removal device according to claim 1 wherein said blades comprise a cutting depth of not greater than about 75 microns.

19. (Withdrawn) A hair removal device according to claim 1 wherein said blades comprise a cutting depth of not greater than about 50 microns.

20. (Withdrawn) A hair removal device according to claim 1 wherein said cutting edges are straight.

21. (Withdrawn) A hair removal device according to claim 1 wherein said cutting edges are serrated.

22. (Withdrawn) A hair removal device according to claim 1 wherein said cutting edges are curved.

23. (Withdrawn) A hair removal device according to claim 1 wherein a plurality of said blades are mounted on separate blade supports.

24. (Withdrawn) A hair removal device according to claim 1 wherein said blades are arranged in ordered columns and rows on said substrate.

25. (Withdrawn) A hair removal device according to claim 1 wherein said blades are arranged in staggered columns and rows on said substrate.

26. (Withdrawn) A hair removal device according to claim 1 further comprising at least one guard element comprising a skin engaging surface.

27. (Withdrawn) A hair removal device according to claim 1 further comprising a plurality of guard elements each comprising at least one skin engaging surface.

28. (Withdrawn) A hair removal device according to claim 26 wherein said guard element is formed of a resilient material.

29. (Withdrawn) A hair removal device according to claim 27 wherein at least some of said guard elements are disposed between some of said blades.

30. (Withdrawn) A hair removal device according to claim 1 wherein at least some of said cutting edges are oriented in different directions.

31. (Withdrawn) A hair removal device according to claim 1 wherein at least some of said cutting edges are oriented in at least two different directions which are angled at least about 90° to each other.

32. (Withdrawn) A hair removal device according to claim 1 wherein said substrate is flexible.

33. (Withdrawn) A hair removal device comprising:
a substrate;
a plurality of blades connected to said substrate, wherein said blades comprise a cutting depth of not greater than about 1000 microns.

34. (Withdrawn) A hair removal device according to claim 33 wherein said cutting depth is not greater than about 500 microns.

35. (Withdrawn) A hair removal device according to claim 33 wherein said cutting depth is not greater than about 250 microns.

36. (Withdrawn) A hair removal device according to claim 33 wherein said cutting depth is not greater than about 100 microns.

37. (Withdrawn) A hair removal device according to claim 33 wherein said cutting depth is not greater than about 75 microns.

38. (Withdrawn) A hair removal device according to claim 33 wherein said cutting depth is not greater than about 50 microns.

39. (Withdrawn) A hair removal device according to claim 33 comprising at least 10 blades.

40. (Withdrawn) A hair removal device according to claim 33 comprising at least about 50 blades.

41. (Withdrawn) A hair removal device according to claim 33 comprising at least about 100 blades.

42. (Withdrawn) A hair removal device according to claim 33 comprising at least about 200 blades.

43. (Withdrawn) A hair removal device according to claim 33 comprising at least about 500 blades.

44. (Withdrawn) A hair removal device according to claim 33 comprising at least about 1000 blades.

45. (Withdrawn) A hair removal device according to claim 33 wherein said blades comprise a radii of curvature not greater than about 1000 angstroms.

46. (Withdrawn) A hair removal device according to claim 33 wherein said radii of curvature is not greater than about 500 angstroms.

47. (Withdrawn) A hair removal device according to claim 33 wherein said radii of curvature is not greater than about 250 angstroms.

48. (Withdrawn) A hair removal device according to claim 33 wherein said radii of curvature is not greater than about 100 angstroms.

49. (Withdrawn) A hair removal device according to claim 33 wherein said radii of curvature is not greater than about 50 angstroms.

50. (Withdrawn) A hair removal device according to claim 33 wherein said radii of curvature is not greater than about 30 angstroms.

51. (Withdrawn) A hair removal device according to claim 33 wherein said radii of curvature is not greater than about 10 angstroms.

52. (Withdrawn) A hair removal device according to claim 33 wherein said cutting edges are straight.

53. (Withdrawn) A hair removal device according to claim 33 wherein said cutting edges are serrated.

54. (Withdrawn) A hair removal device according to claim 33 wherein said cutting edges are curved.

55. (Withdrawn) A hair removal device according to claim 33 wherein said blades are mounted on separate blade supports.

56. (Withdrawn) A hair removal device according to claim 33 wherein said blades are arranged in ordered columns and rows on said substrate.

57. (Withdrawn) A hair removal device according to claim 33 wherein said blades are arranged in staggered columns and rows on said substrate.

58. (Withdrawn) A hair removal device according to claim 33 further comprising at least one guard element comprising a skin engaging surface.

59. (Withdrawn) A hair removal device according to claim 33 further comprising a plurality of guard elements each comprising at least one skin engaging surface.

60. (Withdrawn) A hair removal device according to claim 33 wherein at least some of said guard elements are disposed between some of said blades.

61. (Withdrawn) A hair removal device according to claim 33 wherein at least some of said cutting edges are oriented in different directions.

62. (Withdrawn) A hair removal device according to claim 33 wherein said substrate is flexible.

63. (Withdrawn) A hair removal device according to claim 33 wherein at least some of said cutting edges are oriented in at least two different directions which are angled at least about 90°.

64. (Currently Amended) A hair removal device comprising:
a substantially planar and rigid substrate; and
at least ~~40~~ 100 micro-blades connected to said substrate.

65. (Cancelled)

66. (Cancelled)

67. (Original) A hair removal device according to claim 64 comprising at least about 200 of said micro-blades.

68. (Original) A hair removal device according to claim 64 comprising at least about 500 of said micro-blades.

69. (Original) A hair removal device according to claim 64 comprising at least about 1000 of said micro-blades.

70. (Withdrawn) A hair removal device according to claim 64 wherein said blades comprise a radii of curvature not greater than about 1000 angstroms.

71. (Withdrawn) A hair removal device according to claim 64 wherein said radii of curvature is not greater than about 500 angstroms.

72. (Withdrawn) A hair removal device according to claim 64 wherein said radii of curvature is not greater than about 250 angstroms.

73. (Withdrawn) A hair removal device according to claim 64 wherein said radii of curvature is not greater than about 100 angstroms.

74. (Withdrawn) A hair removal device according to claim 64 wherein said radii of curvature is not greater than about 50 angstroms.

75. (Withdrawn) A hair removal device according to claim 64 wherein said radii of curvature is not greater than about 10 angstroms.

76. (Withdrawn) A hair removal device according to claim 64 wherein said blades comprise a cutting depth of not greater than about 1000 microns.

77. (Withdrawn) A hair removal device according to claim 64 wherein said blades comprise a cutting depth of not greater than about 500 microns.

78. (Withdrawn) A hair removal device according to claim 64 wherein said blades comprise a cutting depth of not greater than about 250 microns.

79. (Withdrawn) A hair removal device according to claim 64 wherein said blades comprise a cutting depth of not greater than about 100 microns.

80. (Withdrawn) A hair removal device according to claim 64 wherein said blades comprise a cutting depth of not greater than about 75 microns.

81. (Withdrawn) A hair removal device according to claim 64 wherein said blades comprise a cutting depth of not greater than about 50 microns.

82. (Withdrawn) A hair removal device according to claim 64 wherein said cutting edges are straight.

83. (Withdrawn) A hair removal device according to claim 64 wherein said cutting edges are serrated.

84. (Withdrawn) A hair removal device according to claim 64 wherein said cutting edges are curved.

85. (Original) A hair removal device according to claim 64 wherein said blades are each mounted on separate blade supports.

86. (Original) A hair removal device according to claim 64 wherein said blades are arranged in ordered columns and rows on said substrate.

87. (Original) A hair removal device according to claim 64 wherein said blades are arranged in staggered columns and rows on said substrate.

88. (Withdrawn) A hair removal device according to claim 64 further comprising at least one guard element comprising a skin engaging surface.

89. (Withdrawn) A hair removal device according to claim 64 further comprising a plurality of guard elements each comprising at least one skin engaging surface.

90. (Withdrawn) A hair removal device according to claim 64 wherein at least some of said guard elements are disposed between some of said blades.

91. (Withdrawn) A hair removal device according to claim 64 wherein at least some of said cutting edges are oriented in different directions.

92. (Withdrawn) A hair removal device according to claim 64 wherein at least some of said cutting edges are oriented in at least two different directions which are angled at least about 90°.

93. (Withdrawn) A hair removal device according to claim 64 wherein said substrate is flexible.

94. (Withdrawn) A hair removal device comprising:
a substrate;
at least about 100 micro abrasive elements connected to said substrate.

95. (Withdrawn) A hair removal device according to claim 94 wherein said substrate is flexible.

96 (Withdrawn) A method of making a personal hair removal device comprising
the steps of:
providing a substrate;
depositing a thin film of at least one etchable material on said substrate;
and
etching a plurality of cutting edges in said deposited film.

97. (Withdrawn) A method of making a personal hair removal device according to claim 96 wherein said etching step also comprises etching blade supports.

98. (Withdrawn) A method of making a personal hair removal device according to claim 96 wherein said etching steps also comprises etching skin engaging elements which do not have sharp edges.

99. (Withdrawn) A method of making a personal hair removal device according to claim 96 further comprising the step of creating a pattern on said deposited film prior to said etching step.

100. (Withdrawn) A method of making a personal hair removal device according to claim 99 wherein said pattern is created by photolithography.

101. (Withdrawn) A method of making a personal hair removal device according to claim 96 wherein said step of providing a substrate comprises providing a flexible substrate.

102. (Withdrawn) A method of making a personal hair removal device according to claim 96 wherein said step of providing a substrate comprises polyimide.

103. (Withdrawn) A method of making a personal hair removal device according to claim 96 wherein said step of providing a substrate comprises polyetheretherketone (PEEK).

104. (Withdrawn) A method of making a personal hair removal device according to claim 96 wherein said step of providing a substrate comprises providing a flexible substrate having a thickness of about 0.05 mm to about 2 mm.

105. (Withdrawn) A method of making a personal hair removal device according to claim 96 wherein said step of providing a substrate comprises providing a flexible substrate having a thickness of about 0.1 mm to about 0.5 mm.

106. (Withdrawn) A method of making a personal hair removal device according to claim 96 wherein said step of depositing a thin film of etchable material comprises depositing a material selected from the group consisting of tungsten, tantalum nitride, boron nitride, diamond, and combinations thereof.

107. (Withdrawn) A method of making a personal hair removal device according to claim 96 wherein said depositing step is performed utilizing chemical vapor deposition.

108. (Withdrawn) A method of making a personal hair removal device according to claim 96 wherein said depositing step is performed utilizing plasma assisted chemical vapor deposition.

109. (Withdrawn) A method of making a personal hair removal device according to claim 96 wherein said depositing step is performed utilizing electron cyclotron resonance deposition.

110. (Withdrawn) A method of making a personal hair removal device according to claim 96 wherein said depositing step is performed utilizing sputter deposition.

111. (Withdrawn) A method of making a personal hair removal device according to claim 96 wherein said depositing step is performed utilizing radio frequency assisted deposition.

112. (Withdrawn) A method of making a personal hair removal device according to claim 96 wherein said etching step comprises sputtering.

113. (Withdrawn) A method of making a personal hair removal device according to claim 96 wherein said etching step comprises reactive ion etching.

114. (Withdrawn) A method of making a personal hair removal device according to claim 96 wherein said etching step comprises ion milling.

115. (Withdrawn) A method of making a personal hair removal device according to claim 96 wherein said etching step comprises wet chemical etching